

## Title (en)

Polymeric fluorescent substance and organic electroluminescence device.

## Title (de)

Polymerischer fluoreszenter Substanz und organische elektrolumineszente Vorrichtungen.

## Title (fr)

Substance fluorescente polymère et dispositifs électroluminescents organiques.

## Publication

**EP 0672741 A1 19950920 (EN)**

## Application

**EP 95103491 A 19950310**

## Priority

- JP 4001694 A 19940310
- JP 7220994 A 19940411
- JP 17795694 A 19940729

## Abstract (en)

Disclosed are an organic electroluminescence device having at least a light emitting layer between the electrodes consisting of one pair of an anode and a cathode, at least one of which electrodes is transparent or semi-transparent, wherein said light emitting layer comprises a polymeric fluorescent substance which emits a fluorescence in a solid state, is soluble in solvents and comprises at least one kind of repeating unit represented by the following formula (1) and at last one kind of repeating unit represented by the following formula (2) with the number of the formula (1) repeating units being 2-50% of the total number of all the repeating units: -Ar1- (1> -Ar2- (2> wherein Ar1 and Ar2 are each a bifunctional group forming a carbon-carbon bond with each of two adjacent groups, in the chemical structure of Ar1, the number of the consecutive atoms present in the shortest path between the two carbon atoms bonding to said two adjacent groups is 1, 3 or 5, and in the chemical structure of Ar2, the total number of the carbon and nitrogen atoms present in the shortest path between the two carbon atoms bonding to said two adjacent groups is an even number, and a novel polymeric fluorescent substance used in the above device.

## IPC 1-7

**C09K 11/06**; **H05B 33/14**

## IPC 8 full level

**C08G 61/00** (2006.01); **C09K 11/06** (2006.01); **H01L 51/30** (2006.01); **H01L 51/50** (2006.01); **H05B 33/14** (2006.01)

## CPC (source: EP US)

**C08G 61/00** (2013.01 - EP US); **C09K 11/06** (2013.01 - EP US); **H05B 33/14** (2013.01 - EP US); **H10K 50/11** (2023.02 - EP US); **H10K 85/111** (2023.02 - EP US); **H10K 85/114** (2023.02 - EP US); **H10K 85/151** (2023.02 - EP US); **Y10S 428/917** (2013.01 - EP US); **Y10T 428/31504** (2015.04 - EP US); **Y10T 428/31678** (2015.04 - EP US)

## Citation (search report)

- [XP] WO 9420589 A2 19940915 - UNIV CALIFORNIA [US]
- [X] WO 9203491 A1 19920305 - CAMBRIDGE RES & INNOVATION [GB], et al
- [X] WO 9203490 A1 19920305 - CAMBRIDGE RES & INNOVATION [GB], et al
- [AP] EP 0637621 A1 19950208 - SUMITOMO CHEMICAL CO [JP]
- [A] EP 0557534 A1 19930901 - IDEMITSU KOSAN CO [JP]
- [A] WO 9403030 A1 19940203 - CAMBRIDGE DISPLAY TECH LTD [GB], et al

## Cited by

KR100750819B1; US6512070B2; SG121712A1; EP1253180A3; EP1116768A3; US7125930B2; US7244515B2; US6316591B1; US7701129B2; WO02088223A1; WO9821262A1; KR101278894B1; US6602969B2; US7256245B2; US7396571B2

## Designated contracting state (EPC)

DE FR GB NL

## DOCDB simple family (publication)

**EP 0672741 A1 19950920**; **EP 0672741 B1 20011017**; DE 69523199 D1 20011122; DE 69523199 T2 20020627; US 5759709 A 19980602; US 5980781 A 19991109

## DOCDB simple family (application)

**EP 95103491 A 19950310**; DE 69523199 T 19950310; US 3602398 A 19980306; US 39748995 A 19950302